

04-25-05

PTO/SB/21 (09-04)

Approved for use through 7/31/2006

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

A# 2162

**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

62

Application Number

09/681,471

Filing Date

April 31, 2001

First Named Inventor

Silva-Craig, et al.

Art Unit

2162

Examiner Name

To, Baoquoc N.

Attorney Docket Number

15-IS-5715 (13035US01)

ENCLOSURES (check all that apply)☒ Fee Transmittal Form☐ Fee Attached☐ Amendment/Reply☐ After Final☐ Affidavits/declaration(s)☐ Extension of Time Request☐ Express Abandonment Request☐ Information Disclosure
Statement☐ Certified Copy of Priority
Document(s)☐ Reply to Missing Parts/
Incomplete Application☐ Reply to Missing Parts under
37 CFR 1.52 or 1.53☐ Drawing(s)☐ Licensing-related Papers☐ Petition☐ Petition to Convert to a
Provisional Application☐ Power of Attorney, Revocation
Change of Correspondence
Address☐ Terminal Disclaimer☐ Request for Refund☐ CD Number of CD(s) _____☐ Landscape Table on CD☐ After Allowance Communication
to TC☐ Appeal Communication to Board
of Appeals and Interferences☒ Appeal Communication to TC
(Appeal Notice, Brief, Reply Brief)**BRIEF ON APPEAL**☐ Proprietary Information☐ Status Letter☐ Return-Receipt Postcard☐ Other Enclosure(s) (please
identify below):

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENTFirm
or

Individual Name

McAndrews Held & Malloy, Ltd.

Name (Print/type)

Christopher R. Carroll

Registration No. (Attorney/Agent)

52,700

Signature

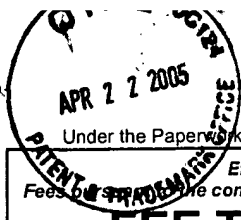
Christopher R. Carroll

Date: April 22, 2005

EXPRESS MAIL DEPOSIT

"Express Mail" mailing label number : EV219882033US

Date of Deposit April 22, 2005.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Effective on 12/08/2004.

Fees due under the consolidated Appropriates Act, 2005 (H.R. 4818).

**FEE TRANSMITTAL
for FY 2005****Complete If Known**

Application Number	09/681,471
Filing Date	April 31, 2001
First Named Inventor	Silva-Craig et al.
Examiner Name	To, Baoquoc N.
Art Unit	2162
Attorney Docket No.	15-IS-5715 (13035US01)

☐ Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT** (\$) 500.00**METHOD OF PAYMENT** (check all that apply)☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____☒ Deposit Account Deposit Account Number: 50-2401 Deposit Account Name: GEMS-IT

For the above-identified deposit account, the Director is hereby authorized to (check all that apply)

☒ Charge Fee(s) indicated below ☐ Charge Fee(s) indicated below, except for the filing fee☒ Charge any additional fee(s) or underpayments of fees(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**FEE CALCULATION****1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid(\$)
	Fee (\$)	Small Entity Fee(\$)	Fee(\$)	Small Entity Fee(\$)	Fee(\$)	Small Entity Fee(\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee(\$)	Small Entity Fee(\$)
Each claim over 20, or for Reissues, each claim over 20 and more than in the original patent	50	25
Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent	200	100
Multiple dependent claims	360	180
Total Claims	Extra Claims	Fee(\$)
_____ -20 or HP _____	x _____	= _____
HP = highest number of total claims paid for, if greater than 20		
Indep. Claims	Extra Claims	Fee(\$)
_____ -3 or HP _____	x _____	= _____
HP = highest number of independent claims paid for, if greater than 3		

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

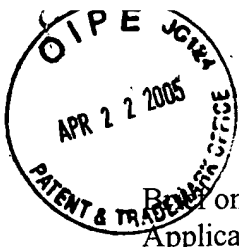
Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee(\$)	Fee Paid(\$)
_____ -100 _____	/50 _____	(round up to a whole number) x _____	= _____	

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other: BRIEF ON APPEAL 500.00**SUBMITTED BY**

Signature	<u>Christopher R. Carroll</u>	Registration No. (Attorney/Agent)	52,700	Telephone	(312)775-8000
Name (print/type)	Christopher R. Carroll	Date	April 22, 2005		



Board on Appeal
Application No. 09/681,471

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In the Application of:

Silva-Craig et al.

Application No.: 09/681,471

Filed: April 13, 2001

For: Application Service Provider
Based Redundant Archive
Services for Medical Archives
and/or Imaging Systems


Examiner: Baoquoc N. To

Group Art Unit: 2172

Attorney Docket No.: 15-IS-5715

CERTIFICATION UNDER 37 C.F.R. §§ 1.08, 1.10

I hereby certify that this document is being deposited with the United States Postal Service on April 22, 2005, in an envelope addressed to the Mail Stop Appeal Brief- Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, utilizing the "Express Mail Post Office to Addressee" service of the United States Postal Service under Mailing Label No. EV219882033US.


Christopher R. Carroll

BRIEF ON APPEAL

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is an Appeal from an Office Action dated September 22, 2004, in which claims 1-8, 11-20, 23-36 and 53-54 were finally rejected. An Advisory Action dated February 9, 2005 maintained these rejections and did not enter an Amendment dated November 22, 2004.

04/26/2005 EFLORES 00000051 502401 09681471

01 FC:1402 500.00 DA

Brief on Appeal
Application No. 09/681,471

This Appeal Brief is submitted in support of the Notice of Appeal filed on February 22, 2005, and is submitted within the two month time period for response. The Applicant respectfully requests that the Board of Patent Appeals and Interferences reverse the final rejection of claims 1-8, 11-20, 23-24, 30, 35-36 and 53-54 of the present application. Pursuant to 37 C.F.R. § 1.17(c), the fee for filing this brief is \$500, to be charged to the Deposit Account of GEMS-IT, 502401.

REAL PARTY IN INTEREST

GE Medical Systems Information Technologies, Inc., a Wisconsin corporation having a place of business at 8200 West Tower Avenue, Milwaukee, Wisconsin 53223-3293, owns the entire right, title and interest in and to the invention, the application, and any and all patents to be obtained therefor, as set forth in the Assignment filed with the present application and recorded on Reel 011920, frame 0327. General Electric Company, a corporation organized under the laws of the state of New York, and having a place of business at 1 River Road, Schenectady, New York 12345, owns 100% of GE Medical Systems Information Technologies, Inc.

RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences currently pending.

STATUS OF THE CLAIMS

Claims 1-8, 11-20, 23-36 and 53-54 are pending in the present application. Pending claims 1-8, 11-20, 23-24, 30, 35-36 and 53-54 have been rejected under 35 U.S.C. § 103(a) and are the subject of this appeal. Specifically, claims 1-5, 7-8 and 11-14 have been finally rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,678,703 to Rothschild et al. ("Rothschild").¹ Claim 6 has been finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Rothschild in view of U.S. Patent No. 6,675,271 to Xu et al. ("Xu").² Claims 15-20, 24-34 and 53-54 have been finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Rothschild in view of U.S. Patent No. 6,678,764 to Parvulescu et al. ("Parvulescu").³ Claims 23 and 35-36 have been finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Rothschild in view of Parvulescu and further in view of Xu.⁴

STATUS OF AMENDMENTS

Subsequent to the final rejection of claims 1-8, 11-20, 23-36 and 53-54 in the Office Action mailed September 22, 2004, proposed amendments to claims 1, 15 and 25 were included in an Amendment filed November 22, 2004. The proposed amendments to

¹ Final Office Action of Sept. 22, 2004 at 2.

² *Id.* at 5.

³ *Id.*

⁴ *Id.* at 10.

claims 1, 15 and 25 were not entered by the Examiner, as stated in the Advisory Action mailed February 9, 2005.

SUMMARY OF INVENTION

The present invention relates to an Application Service Provider ("ASP") based redundant archive services for medical archives and/or imaging systems. Healthcare practitioners employ medical data for the diagnosis and treatment of patients.⁵ This medical data can include medical images, reports, applications and other data and may be obtained from direct examination of a patient, from other healthcare practitioners, from medical diagnostic equipment, and/or other sources.⁶

Medical data may be stored in a computer database such as a Picture Archiving and Communication System ("PACS").⁷ A PACS system can be used to obtain, store, and distribute medical data, to archive medical data in electronic form in a central location, to share medical data among several users, for example.⁸ With the increasing use of PACS systems in the diagnosis and treatment of patients, there is increased need for greater backup and redundancy storage capabilities for medical data. In addition, centralized access to medical data can also improve diagnosis and treatment of patients through the ease of retrieval by multiple users and/or multiple locations. Also, diagnosis

⁵ Pending Application Serial No. 09/681,471 at ¶ 2.

⁶ Id.

⁷ Id. at ¶ 3.

⁸ Id. at ¶ 4.

and/or treatment of a patient may be impaired if the data becomes lost or corrupted. Thus, a need exists for reliability in the storage of medical data to improve diagnosis and treatment of patients.

There is also a need for easier data manipulation and/or preservation between medical diagnostic system upgrades. For example, there is a need for a system to reduce manual transfer and/or re-creation of data, applications, and/or operating system information between an old medical diagnostic or storage system and a new or replacement system.

The present invention provides a centralized remote data storage and retrieval system comprising a data source (110), a remote data store (120), a front-end connection (130), a back-end connection (135), a status monitor (140) and an access authenticator (145).⁹ The data source (110) provides medical data, the status monitor (140) controls the transfer of the medical data from the data source (110) to the remote data store (120), and the remote data store (120) receives and stores the medical data.¹⁰ The access authenticator (145) authenticates access of the remote data store (120) by the data source (110) and/or access of the data store (110) by the remote data store (120) in order to copy, transfer or restore medical data.¹¹

⁹ *Id.* at ¶ 21.

¹⁰ *Id.*

¹¹ *Id.* at ¶ 29.

The data source (110) is a source or point of origin of medical data and may include a picture archiving and communications system (PACS), a medical diagnostic imaging system, a database system, a computer system, a server, a hard disk drive, a terminal, or other medical data storage system, for example.¹²

The remote data store (120) is a device that archives or stores medical data, such as an application service provider, a server, a redundant disk array, a Redundant Array of Independent Disks ("RAID") drive, a hard disk drive, an archive, a database system, a computer system, or other central data storage system, for example.¹³

The front- and back-end connections (130, 135) facilitate the bi-directional transmission and/or reception of files, commands, instructions, communication information, and/or other data, for example, between (1) the data source and the status monitor (and access authenticator) and (2) the status monitor (and access authenticator) and the remote data store.¹⁴ The front-end connection and the back-end connection may compose a data source/data store connection to transfer data between the data source and the remote data store.¹⁵

The status monitor monitors the data source, the remote data store, the front-end connection, and/or the back-end connection.¹⁶ The status monitor monitors and/or controls activities such as:

¹² *Id.* at ¶ 23.

¹³ *Id.* at ¶ 25.

¹⁴ *Id.* at ¶¶ 26-27.

¹⁵ *Id.* at ¶ 27.

¹⁶ *Id.* at ¶ 28.

- requests by the data source and/or remote data store,
- data at the data source and/or remote data store,
- data traveling over the front-end connection and/or the back-end connection, and/or
- commands and/or instructions traveling over the front-end connection and/or the back-end connection, for example.

The present invention provides for three types of medical data archiving actions or steps to be performed. Specifically, the present invention provides for (1) the **archiving** of medical data obtained at the data source at the remote data store, (2) the **restoring** of archived medical data from the remote data store to the data source, and (3) the **copying** of medical data originally obtained at a first data source (and archived at the remote data store) to a second data source.¹⁷

For the archiving of medical data, the data is first obtained using the data source.¹⁸ The data source may then locally store a copy of the medical data.¹⁹ Next, the status monitor may prompt the data source for an authentication code.²⁰ If the access authenticator determines that the authentication code matches a predetermined authentication code, then the status monitor triggers an archive request to be sent to the remote data store and instructs the data source to transmit the medical data to the remote data store.²¹ Once the data source transmits the medical data to the remote data store, the

¹⁷ *Id.* at ¶ 31.

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *Id.* at ¶ 32.

²¹ *Id.* at ¶¶ 32-34.

medical data has been archived. In this way, medical data obtained by a data source is archived so as to provide a back-up in case the data stored at the data source becomes corrupted, lost, or otherwise unreadable.

For the restoring of medical data, the data is first obtained at the data source and archived at the remote data store, as described above in regard to the archiving of medical data.²² Next, an error in the medical data, such as data loss, data corruption, and/or system failure, is discovered.²³ The status monitor may then prompt the data source for an authentication code.²⁴ If the access authenticator determines that the authentication code matches a predetermined authentication code, then the status monitor triggers a restore request to be sent to the remote data store and instructs the remote data store to restore the medical data to the data source.²⁵ Once the remote data store transfers the medical data to the data source, the data has been restored. In this way, an error in the medical data is repaired by restoring the erroneous data with non-erroneous data archived at the remote data store.

For the copying of medical data, the data is first obtained at the data source and archived at the remote data store, as described above in regard to the archiving of medical data.²⁶ Next, the status monitor may detect a need to copy archived medical data to

²² *Id.* at ¶ 37.

²³ *Id.* at ¶ 38.

²⁴ *Id.* at ¶ 39.

²⁵ *Id.* at ¶¶ 39-41.

²⁶ *Id.* at ¶ 43.

another data source.²⁷ For example, medical data may be obtained on a first data source. A second data source, such as a new, upgraded or replacement data source may then be installed.²⁸ In order to ensure that the same medical data stored at the first data source is also stored at the second data source, the medical data previously obtained using the first data source and archived at the remote data store may be copied from the remote data store to the second data source.

Once the status monitor detects a need to copy medical data to a second data source, the status monitor may then prompt the data source for an authentication code.²⁹ If the access authenticator determines that the authentication code matches a predetermined authentication code, then the status monitor triggers a copy request to be sent to the remote data store and instructs the remote data store to copy the medical data to the second data source.³⁰ Once the remote data store transfers the medical data to the second data source, the data has been copied. In this way, medical data obtained at one or more data sources and archived at the remote data store, may be copied to one or more additional data sources.

Thus, embodiments of the present invention provide for the archiving, restoring and copying of medical data in a PACS system in order to protect against the loss or corruption of data and for easier copying of medical data among data sources.

²⁷ *Id.*

²⁸ *Id.* at ¶ 44.

²⁹ *Id.*

³⁰ *Id.* at ¶¶ 45-46.

ISSUES PRESENTED FOR REVIEW

The issues presented for review are listed according to the Grouping of Claims section that follows in this brief.

- (1) Are claims 1-2, 5, 7, and 11-14 unpatentable under 35 U.S.C. § 103(a) (2005) in view of Rothschild?
- (2) Are claims 3 and 4 unpatentable under 35 U.S.C. § 103(a) in view of Rothschild?
- (3) Is claim 19 unpatentable under 35 U.S.C. § 103(a) in view of Rothschild and further in view of Parvulescu?
- (4) Is claim 30 unpatentable under 35 U.S.C. § 103(a) in view of Rothschild and further in view of Parvulescu?
- (5) Is claim 6 unpatentable under 35 U.S.C. § 103(a) in view of Rothschild and further in view of Xu?
- (6) Is claim 23 unpatentable under 35 U.S.C. § 103(a) in view of Rothschild and further in view of Parvulescu and Xu?
- (7) Is claim 35 unpatentable under 35 U.S.C. § 103(a) in view of Rothschild and further in view of Parvulescu and Xu?
- (8) Is claim 8 unpatentable under 35 U.S.C. § 103(a) in view of Rothschild?
- (9) Are claims 15-18, 20, 24 and 54 unpatentable under 35 U.S.C. § 103(a) in view of Rothschild and further in view of Parvulescu?
- (10) Is claim 36 unpatentable under 35 U.S.C. § 103(a) in view of Rothschild and further in view of Parvulescu and Xu?
- (11) Is claim 53 unpatentable under 35 U.S.C. § 103(a) in view of Rothschild and further in view of Parvulescu?

GROUPING OF CLAIMS

The claims do not stand or fall together. The claims of the present appeal stand or fall together in the following groups. Each group of claims is believed to be separately

patentable from the other groups of claims, as will be explained in more detail in the following Argument section.

Claims 1-2, 5, 7 and 11-14 stand or fall together. For the sake of simplicity, Applicant has elected to only argue the substantive merits of the patentability of independent claim 1 in this group. Claims 2, 5, 7 and 11-14 depend from claim 1. Therefore, if claim 1 is deemed patentable, then claims 2, 5, 7 and 11-14 must also be deemed patentable.

Claims 3 and 4 stand or fall together. For the sake of simplicity, Applicant has elected to only argue the substantive merits of the patentability of claim 3 in this group. Claim 4 depends from claim 3. Therefore, if claim 3 is deemed patentable, then claim 4 must also be deemed patentable.

Claim 19 stands or falls by itself.

Claim 30 stands or falls by itself.

Claim 6 stands or falls by itself.

Claim 23 stands or falls by itself.

Claim 35 stands or falls by itself.

Claim 8 stands or falls by itself.

Claims 15-18, 20, 24 and 54 stand or fall together. For the sake of simplicity, Applicant has elected to only argue the substantive merits of the patentability of independent claim 15 in this group. Claims 16-18, 20, 24 and 54 depend from claim 15.

Brief on Appeal
Application No. 09/681,471

Therefore, if claim 15 is deemed patentable, then claims 16-18, 20, 24 and 54 must also be deemed patentable.

Claim 36 stands or falls by itself.

Claim 53 stands or falls by itself.

ARGUMENT

In order to more clearly set forth the patentable differences between the various groups of claims listed above and the references cited by the Examiner in each of his rejections, the Applicant has grouped the claims according to common patentable limitations appearing in each claim. The Applicant respectfully submits that claims 1-8, 11-20, 23-24, 30, 35-36 and 53-54 are distinguishable over the prior art.

I. The Law Of Obviousness Under 35 U.S.C. § 103(a)

The Examiner has rejected all pending claims under 35 U.S.C. § 103(a), which states:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.³¹

There are "three basic criteria" for "a *prima facie* case of obviousness."

³¹ 35 U.S.C. § 103(a).

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.³²

The Final Office Action of September 22, 2004 violates the last of the three basic legal criteria set out above for establishing a *prima facie* case, which is: "all the claim limitations must be taught or suggested by the prior art."³³

In ascertaining the differences between the prior art and the claims of a pending application under 35 U.S.C. § 103(a), the analysis "is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious."³⁴ Moreover, "[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art."³⁵ As described in detail below, none of the references cited by the Examiner teach or suggest all limitations of the appealed claims.

A critical step in analyzing the patentability of claims pursuant to § 103(a) is casting the mind back to the time of invention, to properly consider the thinking of one of

³² MANUAL OF PATENT EXAMINING PROCEDURE § 2142 (8th ed., rev. 2, May 2004) at 128 (citing *In re Vaack*, 947 F.2d 488 (Fed. Cir. 1991)) (hereinafter cited as "MPEP").

³³ MPEP § 2143.03 at 133 (citing *In re Royka*, 490 F.2d 981 (C.C.P.A. 1974)) (emphasis added).

³⁴ MPEP § 2141.02 at 124-125 (citing *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530 (Fed. Cir. 1983)).

³⁵ MPEP § 2143.03 at 133 (quoting *In re Wilson*, 424 F.2d 1382, 1385 (C.C.P.A. 1970)).

ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field.³⁶ The proper obviousness analysis under 35 U.S.C. § 103(a) must occur at the time the invention was made and avoid the impermissible use of hindsight:

To reach a proper determination under 35 U.S.C. 103, the examiner must step backward in time and into the shoes worn by the hypothetical “person of ordinary skill in the art” when the invention was unknown and just before it was made. In view of all factual information, the examiner must then make a determination whether the claimed invention would have been obvious at that time to that person. . . . The tendency to resort to “hindsight” based upon applicant’s disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.³⁷

In applying a reference under 35 U.S.C. § 103(a), the “reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.”³⁸ In other words, the cited prior art as a whole must be considered, taking into account the negative teachings that would lead a person of ordinary skill away from the patented invention, as well as the teachings unfavorable to patentability.³⁹ The Federal Circuit held in the *Dow* case:

In determining whether such a suggestion can fairly be gleaned from the prior art, the full field of the invention must be considered; for the person of ordinary skill is charged with knowledge of the entire body of technological literature, including that which might lead away from

³⁶ *In re Kotzab*, 217 F.3d 1365, 1369 (Fed. Cir. 2000); *see also In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999); *Grain Processing Corp. v. Am. Maize-Prods. Co.*, 840 F.2d 902, 907 (Fed. Cir. 1988) (cautioning against employing hindsight by using the appellant’s disclosure as a blueprint to reconstruct the claimed invention from the isolated teachings of the prior art).

³⁷ MPEP § 2142 at 128.

³⁸ MPEP § 2141.02 at 127 (citing *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540 (Fed. Cir. 1983)).

³⁹ *In re Dow Chemical Co.*, 837 F.2d 469, 473 (Fed. Cir. 1988).

the claimed invention. The Commissioner argues that since the PTO is no longer relying on Farmer or the Bacon and Farmer article, the applicant is creating a “straw man”. It is indeed pertinent that these references teach against the present invention. Evidence that supports, rather than negates, patentability must be fairly considered.⁴⁰

Moreover, the law gives significant weight to the fact that the only prior art on point teaches away from limitations of a pending claim.⁴¹

Finally, as a dependent claim includes all the limitations of the base claim(s) from which it depends, “[i]f an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious.”⁴² In other words, if an independent claim is nonobvious, then all claims depending on the independent claim are also nonobvious.

The Applicant now presents arguments in favor of the patentability of pending claims 1-8, 11-20, 23-24, 30, 35-36 and 53-54.

II. Claims 1-2, 5, 7 And 11-14 Are Patentable Under 35 U.S.C. § 103(a) In View Of Rothschild

In the Final Office Action mailed September 22, 2004, the Examiner rejected claims 1-5, 7-8 and 11-14 under 35 U.S.C. § 103(a) in view of Rothschild.⁴³ Claims 1-2,

⁴⁰ *Id.* (emphasis added).

⁴¹ *See Ecolochem, Inc. v. S. Cal. Edison Co.*, 227 F.3d 1361, 1374 (Fed. Cir. 2000) (“The absence of a convincing discussion of the specific sources of the motivation to combine the prior art references, particularly in light of the strength of prior art teaching away from the use of the Houghton process, is a critical omission in the district court’s obviousness analysis, which mainly discusses the ways that the multiple prior art references can be combined to read on the claimed invention.”).

⁴² MPEP § 2143.03 at 133 (citing *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988)).

⁴³ Final Office Action of Sept. 22, 2004 at 3.

5, 7 and 11-14 are discussed together as a group separate from claims 3-4 and 8 because each of claims 3-4 and 8 recite additional patentable limitations, as described below. However, as claims 3-4 and 8 depend from claim 1, if claim 1 is deemed patentable, then claims 3-4 and 8 must also be deemed patentable.

For the sake of simplicity, Applicant has elected to only argue the substantive merits of the patentability of independent claim 1 in this group. If claim 1 is deemed patentable, then claims 2, 5, 7 and 11-14, which depend from claim 1, must also be deemed patentable.⁴⁴

Independent claim 1 recites (with emphasis added):

1. A central medical data archiving system, said system comprising:

a medical data source providing medical data, wherein said medical data comprises at least one of a medical image, a medical patient report, and a medical application;

a status monitor for controlling the transfer of said medical data from said data source to a centralized remote data store, **wherein said status monitor monitors operations** occurring at at least one of said data source and centralized remote data store **and triggers transfer** of said medical data to said centralized remote data store **based on said operations**; and

⁴⁴ MPEP § 2143.03 at 133 (citing *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988)).

a centralized remote medical data store receiving said medical data and storing said medical data, wherein said centralized remote medical data store comprises an application service provider.

Rothschild is the foundational reference relied upon by the Examiner in rejecting all claims of the present application. Rothschild is directed to a system and method for managing medical images at a central data management system.⁴⁵ Through their invention, Messrs. Rothschild and Prasad have attempted to improve on the distribution of electronic records and medical images. The Rothschild patent describes a medical imaging system, a central data management system, and one or more remote image viewing systems.⁴⁶ Within the medical imaging system, medical images of a patient are obtained and transferred to a local image workstation.⁴⁷ The local image workstation stores the images locally and then automatically pushes, or transfers, the images from the medical imaging system to the central data management system.⁴⁸ Once the images are received at the central data management system, the images are once again stored at that location and are automatically pushed, or transferred, to the remote viewing system(s).⁴⁹

At each instance of transferring the images (once from the imaging system to the central data management system and a second time from the central data management system to the remote viewing system), the images are automatically pushed or transferred

⁴⁵ Rothschild at Abstract.

⁴⁶ *Id.* at col. 18, line 39 through col. 19, line 4.

⁴⁷ *Id.* at col. 18, lines 42-51.

⁴⁸ *Id.* at col. 18, lines 53-56.

⁴⁹ *Id.* at col. 18, lines 63-67.

from one point to another as soon as possible.⁵⁰ In other words, the images are pushed, without any trigger or request, from a first location to a second location as soon as possible. The purpose of this feature of the Rothschild invention is to ensure that images are routed to doctors at remote viewing systems as soon as possible:

In contrast to other known efforts at providing a medical image management ASP, the present invention employs “push” delivery of medical images directly to the referring physician’s office or offices, which may be completed according to the invention **immediately after generating the image at the medical imaging center**. The use of the push methodology directly addresses the needs of referring physicians prescribe [sic] the imaging study in order to diagnose or treat a patient. Clearly, these healthcare providers want the images delivered to their office(s) just as they have the [x-ray] films delivered today. With push delivery of electronic image records according to the invention, the image delivery will take place in the background and be on the physician’s desktop computer ready for review whenever the doctor is ready to view them.⁵¹

Therefore, Rothschild describes a system and method that obtains and transfers images along a routing path (that includes the imaging, data management, and viewing systems), where the images are pushed from one point to another along the path as soon as possible. While the images may be locally stored at each point along the routing path, the images are automatically routed, as soon as possible, from one point to another, without waiting for a trigger from any other device, processor, or process. That is, each location in the routing path independently sends the images to the next point in the routing path

⁵⁰ *Id.* at col. 18, lines 53-56 and lines 63-67.

⁵¹ *Id.* at col. 23, lines 40-54 (emphasis added).

without waiting for any other device, processor or process to command or instruct the location to transfer the image to the next point in the path.

In rejecting independent claim 1, the Examiner recognizes that Rothschild does not teach a status monitor for controlling the transfer of medical data from a data source to a centralized remote data store.⁵² However, the Examiner asserts that Rothschild teaches a medical image center that “track[s] the entire process of image delivery and review from [a] local image workstation (20) merely by reference to the local image workstation (20) located in their [sic] respective clinic or hospital. The medical image center is the status monitor.”⁵³

While the medical image center of Rothschild may “track the entire process of image deliver storage and review from the local image workstation,”⁵⁴ Rothschild does not teach or suggest the medical image center (or any other component of any system taught by Rothschild) **monitoring operations** occurring at a data source and/or a centralized remote data store and then **triggering** the transfer of medical data to the centralized remote data store based on the operations, as recited in claim 1. Instead, Rothschild merely describes the pushing or transferring of medical data from point to point along a routing path as soon as possible.⁵⁵ Rothschild does not describe any status monitor (whether a device, processor, or process separate or included in any one of the

⁵² Final Office Action of Sept. 22, 2004 at 3.

⁵³ Final Office Action of Sept. 22, 2004 at 3.

⁵⁴ Rothschild at col. 29, lines 12-14.

⁵⁵ *Id.* at col. 18, lines 48-67.

imaging, data management, and remote viewing systems) that monitors operations occurring at a data source and/or a remote data storage location and then triggers the transfer of the medical data from one system to another. In other words, Rothschild describes a system that merely transmits data as soon as possible, without waiting for any trigger:

The central data management system (30) [of Rothschild] actively “pushes” the electronic records (5) and associated images (6) to the remote image viewing systems (40) of the radiologists and referring doctors as soon as the images are available. . . . Therefore, at each of the locations where the images would be needed, the remote image viewing station (40) would be running and available at all times on the Internet in order to achieve immediate “push” delivery of the images as soon as they become available.⁵⁶

Thus, while Rothschild describes the automatic routing of medical data, claim 1 includes a limitation that requires a status monitor to both monitor operations (occurring at a data source and/or a centralized remote data store) and trigger the transfer of medical data based on the operations. Claim 1 therefore recites at least one limitation not taught by Rothschild.

The Examiner provides no other support for his assertion that pending claim 1 is obvious in view of Rothschild. Each of pending claims 2, 5, 7, and 11-14 depend from claim 1. Therefore, as Rothschild does not teach or suggest elements of pending claim 1, Applicant respectfully submits that the Examiner’s rejection of claims 1, 2, 5, 7, and 11-14 under 35 U.S.C. § 103(a) in view of Rothschild should not be allowed to stand.

⁵⁶ *Id.* at col. 22, lines 25-38 (emphasis added).

Moreover, pending claims 3-4, 6 and 8 also depend from claim 1. The Applicant has grouped these pending claims separately from claims 1-2, 5, 7, and 11-14 because each of claims 3-4 and 8 includes additional patentable limitations, as described in more detail below. However, if claim 1 is deemed patentable, then claims 3-4 and 8 must also be deemed patentable.

III. Claims 3 And 4 Are Patentable Under 35 U.S.C. § 103(a) In View Of Rothschild

In the Final Office Action mailed September 22, 2004, the Examiner rejected claims 3 and 4 under 35 U.S.C. § 103(a) in view of Rothschild.⁵⁷ The Applicant has grouped claims 3 and 4 together because each of these claims includes an additional limitation relating to authenticating access to a remote data store (with emphasis added):

3. The system of claim 1, further comprising an access authenticator for **authenticating access to said remote data store by said data source.**

4. The system of claim 3, wherein said access authenticator **authenticates access to said data source.**

For the sake of simplicity, the Applicant will only argue the substantive merits of claim 3. Claim 4 depends from claim 3. Therefore, if claim 3 is deemed patentable, then claim 4 must also be deemed patentable.⁵⁸ The Applicant respectfully submits that Rothschild

⁵⁷ Final Office Action of Sept. 22, 2004 at 2.

⁵⁸ MPEP § 2143.03 at 133 (citing *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988)).

also does not teach or suggest authenticating access to a remote data store. Therefore, the Applicant submits that claims 3 and 4 stand or fall together and are patentable under 35 U.S.C. § 103(a) in view of Rothschild.

The access authenticator of the pending claims is employed to permit or deny access to a remote data store.⁵⁹ If access is granted, the access authenticator permits medical data to be archived, restored, or copied, as described above in the Summary Of The Invention section of this Brief.⁶⁰

With regard to claim 3, the Examiner asserts, "Rothschild teaches an access authenticator for authenticating access to said remote data store by said data source (login)."⁶¹ Contrary to the Examiner's assertions, however, Rothschild does not teach or suggest any access authenticator for authenticating access to a remote data store. In fact, Rothschild explicitly teaches away from authenticating any access to a remote data store by repeatedly criticizing the authentication required by other systems and methods to deliver medical images:⁶²

In general, most of the known systems and method for managing medical images in electronic record format use "pull" type image delivery protocol which requires the referring physician to log on to a web server and then download his or her patient's images. However, busy physicians do not

⁵⁹ See, e.g., Pending Application Serial No. 09/681,471 at ¶ 29.

⁶⁰ *Id.* at ¶ 32.

⁶¹ Final Office Action of Sept. 22, 2004 at 4.

⁶² While Rothschild repeatedly criticizes other systems and methods for requiring authentication before a physician may download or access medical images, the Applicant respectfully submits that Rothschild's criticisms are insufficient to establish that the criticized systems and methods teach or suggest the limitations of claim 3. For example, none of Rothschild's criticisms teach or suggest that prior systems included an access authenticator for authenticating access to a remote data store by a data source (as recited in pending claim 3).

have the time or the desire to access their patient's images in this manner. The "pull" model requires the physician to log in as well as extensive physician input and time to initiate the data transfer.⁶³

All other known medical image management systems and methods are believed to require the physician to log on to web sites and then download the images to his computer. Hence, with other ASP systems not associated with the present invention, if the physician wishes to see his patients' images again, he must repeat the extensive and lengthy login and download procedures. It is believed that such methods which rely upon the physician to actively login and download, will be unacceptable for the referring doctors who are extremely busy and are used to images being delivered to them on film.⁶⁴

Rothschild also clearly states that its invention delivers medical images to doctors and radiologists as soon as the images are available, without requiring any type of authentication before the images are delivered:

The central data management system (30) actively "pushes" the electronic records (5) and associated images (6) to the remote image viewing systems (40) of the radiologists and referring doctors as soon as the images are available. **This contrasts with the "pull" model where the images are stored on a server and a user has to login** and initiate a download in order to view the images.⁶⁵

In other words, Rothschild describes a system and method where medical images are transferred from an image source (Rothschild's medical imaging system) to a central data management system, then to a remote image viewing system as quickly as possible, with no additional delays introduced by requiring that access to any of the image source, central data management system, and/or remote image viewing system be authenticated.

⁶³ Rothschild at col. 4, lines 42-50.

⁶⁴ *Id.* at col. 24, line 60 through col. 25, line 3.

⁶⁵ *Id.* at col. 22, lines 25-31 (emphasis added).

The only disclosure in Rothschild of any authentication occurs in one embodiment, namely an embodiment that includes a polling system within a remote viewing station.⁶⁶ In this embodiment, the polling system automatically polls the central data management system for medical data that is queued for delivery to the remote viewing station.⁶⁷ The polling system determines the IP address of the remote viewing station and notifies the central database (assumed to be part of the central data management system) of its current IP address.⁶⁸ An IP notifier of the polling system then notifies the central database of the IP address “after proper authentication.”⁶⁹ In other words, the only authentication disclosed in Rothschild is the authentication of a remote viewing station’s current IP address.

This embodiment of Rothschild does not teach or suggest limitations recited by claim 3. First, it is unclear how the “proper authentication” is performed. Rothschild is devoid of any teaching or suggestion of how the IP notifier is properly authenticated. The only disclosure of the IP polling system in Rothschild is located at column 15, line 43 through column 17, line 12 and at column 32, line 40 through column 33, line 55. However, nowhere in these sections is any disclosure, teaching or suggestion of an access authenticator for authenticating access to a remote data store by a data source, as recited in claim 3.

⁶⁶ Rothschild at col. 15, lines 54-65.

⁶⁷ *Id.*

⁶⁸ *Id.* at col. 15, lines 58-59.

⁶⁹ *Id.*

Moreover, assuming for the sake of argument that Rothschild did sufficiently disclose an access authenticator or a step of authenticating access, such a disclosure only describes authenticating access to the central data management system by a remote viewing station in order to provide a current IP address. In other words, assuming *arguendo* that Rothschild does provide such a sufficient disclosure, Rothschild only describes an end-of-the-line, downstream viewing station (used by a physician or radiologist to review a patient's medical images)⁷⁰ that provides a central data management system with a current IP address of the viewing station once a polling system in the viewing station has received "proper authentication."⁷¹

However, this authentication in Rothschild is substantially different from the access authentication of claim 3. The authentication of Rothschild is to ensure that the central database receives IP addresses only from authenticated the remote viewing stations.⁷² In contrast, the access authenticator of claim 3 determines whether medical data is archived, restored, or copied from a remote data store to a data source.⁷³ There is no other teaching or suggestion in Rothschild of authenticating access to a remote data store by a data source.

Therefore, Rothschild fails to teach or suggest elements of claim 3. The only disclosure in Rothschild relating to a type of access authentication is insufficient to teach

⁷⁰ *Id.* at col. 24, lines 4-9.

⁷¹ *Id.* at col. 54-64.

⁷² Again, assuming *arguendo* that Rothschild's disclosure is sufficient to support any teaching or suggestion of authenticating any sort or type of access.

⁷³ See, e.g., Pending Application Serial No. 09/681,471 at ¶¶ 32, 39, 44.

or suggest the limitations of these claims. Moreover, assuming *arguendo* that the disclosure of Rothschild was sufficient to teach or suggest some type of authenticated access, the authenticated access does not teach or suggest the limitations recited in claim 3. Claim 4 depends from claim 3. Thus, claims 3 and 4 are not obvious under 35 U.S.C. § 103(a) in view of Rothschild.

Moreover, as claims 3 and 4 depend from claim 1, if claim 1 is deemed patentable, then claims 3 and 4 must also be deemed patentable.⁷⁴

Therefore, the Examiner's final rejection of pending claims 3 and 4 under 35 U.S.C. § 103(a) in view of Rothschild should not be allowed to stand.

IV. Claim 19 Is Patentable Under 35 U.S.C. § 103(a) In View Of Rothschild And Further In View Of Parvulescu

In the Final Office Action mailed September 22, 2004, the Examiner rejected claim 19 under 35 U.S.C. § 103(a) in view of Rothschild and further in view of Parvulescu.⁷⁵ The Applicant has grouped claim 19 by itself because claim 19 depends from claim 15 and includes an additional limitation relating to authenticating access to a remote data store (with emphasis added):

19. The system of claim 15, further comprising an access authenticator for **authenticating access to said remote data store.**

⁷⁴ MPEP § 2143.03 at 133 (citing *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988)).

⁷⁵ Final Office Action of Sept. 22, 2004 at 5.

While the limitation of claim 19 is similar to the limitations of claims 3, 4 and 30, claim 19 is discussed separately because each of these claims depend from a different independent claim.⁷⁶ The Applicant respectfully submits that neither Rothschild nor Parvulescu, alone or in combination, teach or suggest authenticating access to a remote data store. Therefore, the Applicant submits that claim 19 stands or falls by itself and is patentable under 35 U.S.C. § 103(a) in view of Rothschild and Parvulescu.

Moreover, as claim 19 depends from claim 15, if claim 15 is deemed patentable, then claim 19 must also be deemed patentable.⁷⁷

With regard to claim 19, the Examiner asserts, “Rothschild teaches an access authenticator fro [sic] authenticating access to said remote data store (login).”⁷⁸ However, as described above, Rothschild does not teach or suggest any access authenticator for authenticating access to a remote data store. Moreover, also as described above, Rothschild explicitly teaches away from authenticating any access to a remote data store by repeatedly criticizing the authentication required by other systems and methods to deliver medical images.

⁷⁶ Specifically, claims 3 and 4 depend from claim 1, claim 19 depends from claim 15, and claim 30 depends from claim 25.

⁷⁷ MPEP § 2143.03 at 133 (citing *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988)).

⁷⁸ *Id.* at 7.

Parvulescu does not remedy the shortcomings of Rothschild described above with regard to claim 19.⁷⁹ Specifically, Parvulescu does not teach or suggest any access authenticator for authenticating access to a remote data store, as recited in claim 19.

Parvulescu describes a system and method for archiving medical images.⁸⁰ The system and method provide an improved medical image archiving system by allowing images traditionally generated in analog form to be readily converted into digital form.⁸¹ A medical image archiving device receives an analog signal from an image capture device, stores the image in digital form, and outputs the digital image to a media writer and a printer.⁸² The digitally-captured images may be centrally stored in a hospital server database so as to provide access to one or more client workstations connected to the same Local Area Network ("LAN") as the hospital server.⁸³

However, Parvulescu does not include any teaching or suggestion of authenticating access to a remote data store. The only disclosure in Parvulescu related to any type of selective or limited access to medical image data is limited to following excerpt:

⁷⁹ Moreover, even though Parvulescu was not cited in the Examiner's final rejection of pending claims 3 and 4, Parvulescu is also insufficient to overcome the shortcomings of Rothschild, as described in part III of the Argument section of this Brief.

⁸⁰ Parvulescu at Abstract.

⁸¹ *Id.* at col. 3, lines 19-26.

⁸² *Id.* at col. 4, lines 33-37.

⁸³ *Id.* at col. 5, lines 9-17.

Security software 154, such as that commercially available from Verisign, 1350 Charleston Road, Mountain View, Calif. 94043 or others can be used to control access to the images.⁸⁴

The Applicant respectfully submits that this reference to security software is insufficient to constitute a teaching or suggestion of authenticating access to a remote data store, as recited in claim 19. For example, it is unclear if “security software . . . used to control access to the images” means that only users of a particular type of software have the ability to access the images, or if the security software otherwise blocks access to the medical images. Therefore, as Parvulescu is devoid of any other teaching or suggestion of authenticating access to a remote data store, Parvulescu does not teach or suggest elements of claim 19.⁸⁵

In addition, a combination of Rothschild and Parvulescu also fails to teach or suggest elements of claim 19. As described above, both Rothschild and Parvulescu fail to teach or suggest an access authenticator authenticating access to a remote data store. Therefore, a combination of the two references also fails to teach or suggest limitations of claim 19.⁸⁶

In conclusion, both Rothschild and Parvulescu, taken alone or in combination, fail to teach or suggest limitations of claim 19.⁸⁷ Claim 19 was rejected by the Examiner

⁸⁴ *Id.* at col. 5, lines 40-43.

⁸⁵ In addition, as pending claims 3 and 4 recite limitations similar to claim 19, Parvulescu also fails to teach or suggest limitations in claims 3 and 4.

⁸⁶ *Id.*

⁸⁷ While the Examiner has not rejected claims 3 and 4 under 35 U.S.C. § 103(a) in view of Parvulescu alone or in view of Rothschild and further in view of Parvulescu, as described above,

under 35 U.S.C. § 103(a) in view of Rothschild and further in view of Parvulescu. The Applicant respectfully submits that the Examiner's final rejection of claim 19 should not be allowed to stand.

Moreover, as claim 19 depends from claim 15, if claim 15 is deemed patentable, then claim 19 must also be deemed patentable.⁸⁸

V. Claim 30 Is Patentable Under 35 U.S.C. § 103(a) In View Of Rothschild And Further In View Of Parvulescu

In the Final Office Action mailed September 22, 2004, the Examiner rejected claim 30 under 35 U.S.C. § 103(a) in view of Rothschild and further in view of Parvulescu.⁸⁹ The Applicant has grouped claim 30 by itself because claim 30 depends from claim 25 and includes an additional limitation relating to authenticating access to a remote data store (with emphasis added):

30. The method of claim 25, further comprising the step of
authenticating access to said remote data store.

The Applicant respectfully submits that neither Rothschild nor Parvulescu, alone or in combination, teach or suggest authenticating access to a remote data store. Therefore, the

neither Rothschild nor Parvulescu, taken alone or in combination, teach or suggest limitations in claims 3 and 4 as well.

⁸⁸ MPEP § 2143.03 at 133 (citing *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988)).

⁸⁹ Final Office Action of Sept. 22, 2004 at 10. While the Applicant does not appeal the Examiner's rejection of claims 25-29 and 31-34, the Applicant respectfully submits that claim 30, which depends from claim 25, would be allowable if rewritten in independent form including all of the limitations of claim 25.

Applicant submits that claim 30 stands or falls by itself and is patentable under 35 U.S.C. § 103(a) in view of Rothschild and Parvulescu.

With regard to claim 30, the Examiner asserts, “Rothschild teaches authenticating access to said remote data store (login).”⁹⁰ However, as described above, Rothschild does not teach or suggest any access authenticator for authenticating access to a remote data store. Moreover, also as described above, Rothschild explicitly teaches away from authenticating any access to a remote data store by repeatedly criticizing the authentication required by other systems and methods to deliver medical images.

Also as described above, Parvulescu does not remedy the shortcomings of Rothschild with regard to claim 30. Therefore, neither Rothschild nor Parvulescu, taken alone or in combination, teach or suggest limitations of claim 30. Claim 30 was rejected by the Examiner under 35 U.S.C. § 103(a) in view of Rothschild and further in view of Parvulescu. The Applicant respectfully submits that the Examiner’s final rejection of claim 30 should not be allowed to stand.

VI. Claim 6 Is Patentable Under 35 U.S.C. § 103(a) In View Of Rothschild And Further In View Of Xu

The Examiner finally rejected pending claim 6 under 35 U.S.C. § 103(a) in view of Rothschild and further in view of Xu.⁹¹ The Applicant has grouped claim 6 by itself

⁹⁰ Final Office Action of Sept. 22, 2004 at 9.

⁹¹ *Id.* at 5.

because claim 6 depends from claim 1 and includes an additional limitation of restoring medical data from a remote data store to a data source:

6. The system of claim 5, wherein said remote data store further restores said medical data to said data source.

The Applicant respectfully submits that Xu is unavailable as a reference under 35 U.S.C. § 103(a) and Rothschild does not teach or suggest restoring medical data to a data source from a remote data store. Therefore, the Applicant submits that claim 6 stands or falls by itself and is patentable under 35 U.S.C. § 103(a) in view of Rothschild.

Moreover, as claim 6 depends from claim 1, if claim 1 is deemed patentable, then claim 6 must also be deemed patentable.⁹²

Xu describes PACS archiving techniques. However, Xu is unavailable as a prior art reference under 35 U.S.C. § 103(a). Specifically, 35 U.S.C. § 103(c)(1) states:

Subject matter developed by another person, which qualifies as prior art only under one or more subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.⁹³

Therefore, Xu is unavailable as an invalidating reference under 35 U.S.C. § 103(a) if the subject matter of Xu: (1) was developed by another person, (2) qualifies as prior art only under 35 U.S.C. § 102(e), (f), and (g), and (3) at the time the invention was made, the

⁹² MPEP § 2143.03 at 133 (citing *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988)).

⁹³ 35 U.S.C. § 103(c).

subject matter of Xu and the claimed invention of pending claim 6 were owned by the same person or subject to an obligation of assignment to the same person.

As for the first requirement of 35 U.S.C. § 103(c)(1), the persons listed as inventors of the subject matter of Xu are Xiaofeng Xu and Glenn Robert Kulpinski. The inventors of pending claim 6 are Milton Silvia-Craig, Thanos Karras, and Greg Angst. Therefore, the subject matter of Xu was developed by persons different from the inventors of the invention claimed in pending claim 6.

As for the second requirement of 35 U.S.C. § 103(c)(1), a reference may qualify as prior art only under 35 U.S.C. § 102(e), (f) or (g) if “(e) the invention was described in . . . (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent”⁹⁴ Xu was filed December 16, 1999, before the filing date of the present application. However, Xu did not issue as a patent until January 6, 2004, after the filing date of the present patent application. Therefore, Xu only qualifies as prior art under 35 U.S.C. § 102(e).

As for the final requirement of 35 U.S.C. § 103(c)(1), at the time the invention claimed in claim 6 was made, both the subject matter of Xu and the claimed invention of claim 6 were owned by General Electric Company. Xu was assigned to General Electric Company of Schenectady, New York. The present application was assigned to GE Medical Systems Information Technologies, Inc., of 8200 West Tower Avenue,

⁹⁴ 35 U.S.C. § 102(e).

Milwaukee, Wisconsin 53223-3293, as shown by an assignment recorded on June 20, 2001, at Reel 011920, Frame 0327. GE Medical Systems Information Technologies, Inc. is a corporation that is wholly owned by General Electric Company of Schenectady, New York.

Thus, all three requirements of 35 U.S.C. § 103(c)(1) are met and Xu is unavailable as a reference under 35 U.S.C. § 103(a).

The Examiner recognized in the Final Office Action of Sept. 22, 2004, that “[r]egarding on claim 6, Rothschild does not teach the remote data store further restores said medical data to said data source.”⁹⁵ Moreover, there is no disclosure in Rothschild discussing any act of transferring, copying or restoring medical data from a remote location to a medical data source, as recited in claim 6. In short, Rothschild does not teach or suggest any communication of medical data from a remote data store to a data source. Thus, Rothschild also does not suggest restoring medical data from a remote data store to a data source.

The Examiner has not provided any additional support (other than Xu) for the 35 U.S.C. § 103(a) rejection of claim 6. Therefore, none of the references cited by the Examiner and available under 35 U.S.C. § 103(a) teach or suggest a limitation of pending

⁹⁵ Final Office Action of Sept. 22, 2004 at 5.

claim 6.⁹⁶ The Applicant therefore respectfully submits that the Examiner's rejection of claim 6 should not be allowed to stand.

Moreover, as claim 6 depends from claim 1, if claim 1 is deemed patentable, then claim 6 must also be deemed patentable.⁹⁷

VII. Claim 23 Is Patentable Under 35 U.S.C. § 103(a) In View Of Rothschild And Further In View Of Parvulescu And Xu

The Examiner finally rejected pending claim 23 under 35 U.S.C. § 103(a) in view of Rothschild and further in view of Parvulescu and Xu.⁹⁸ The Applicant has grouped claim 23 by itself because claim 23 depends from claim 15 and includes an additional limitation of restoring medical data from a remote data store to a data source:

23. The system of claim 15, wherein said remote data store restores said medical data at said data source.

The Applicant respectfully submits that as none of the available references teach or suggest a remote data store restoring medical data to a data source, claim 23 is patentable over Rothschild and Parvulescu. Moreover, as claim 23 depends from claim 15, if claim 15 is deemed patentable, then claim 23 must also be deemed patentable.⁹⁹

⁹⁶ In addition, although not cited by the Examiner in his 35 U.S.C. § 103(a) rejection of claim 6, Parvulescu, taken alone or in combination with Rothschild, also does not teach or suggest the limitations of claim 6, as described in more detail below in part VII of the Argument section of this Brief.

⁹⁷ MPEP § 2143.03 at 133 (citing *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988)).

⁹⁸ Final Office Action of Sept. 22, 2004 at 10.

⁹⁹ MPEP § 2143.03 at 133 (citing *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988)).

As described above, Xu is unavailable as a reference under 35 U.S.C. § 103(a). In addition, the Examiner recognized that “regarding[] claims 23 and 35-36 [sic]¹⁰⁰, Rothschild does not explicitly teach the remote data store restores said medical data at said data source.”¹⁰¹ As described above in part VI of the Argument section of this Brief, there is no disclosure in Rothschild discussing any act of restoring medical data from a remote location to a data source. Thus, Rothschild also does not suggest restoring medical data from a remote data store to a data source.

Finally, Parvulescu does not remedy the shortcomings of Rothschild. Parvulescu is devoid of any disclosure, description, teaching or suggestion of any transferring, restoring, or copying of medical data to a data source. In short, there is no teaching or suggestion in Parvulescu of communicating medical data from a remote data store to a data source. Therefore, Parvulescu also does not teach or suggest a limitation of claim 23.

A combination of Rothschild and Parvulescu also fails to teach or suggest a remote data store restoring medical data to a data source. As neither reference teaches or suggests such data restoration, a combination of these references similarly cannot teach or suggest a remote data store restoring medical data to a data source.

¹⁰⁰ The Examiner incorrectly inferred that pending claim 36 includes a limitation of restoring medical data from a remote data store to a data source. However, claim 36 includes a limitation of copying medical data from a remote data store to a second data source. Therefore, this Section of the Brief will only address claims 23 and 35 (the “restoring” claims). Part X of the Argument section of this Brief will address claim 36.

¹⁰¹ Final Office Action of Sept. 22, 2004 at 10.

None of the references cited by the Examiner and available as a reference in his rejection under 35 U.S.C. § 103(a) of claim 23 teach or suggest, alone or in combination, limitations of claim 23. Therefore, the Applicant respectfully submits that the rejection of claim 23 under 35 U.S.C. § 103(a) should not be allowed to stand.

Moreover, as claim 23 depends from claim 15, if claim 15 is deemed patentable, then claim 23 must also be deemed patentable.¹⁰²

VIII. Claim 35 Is Patentable Under 35 U.S.C. § 103(a) In View Of Rothschild And Further In View Of Parvulescu And Xu

The Examiner finally rejected pending claim 35 under 35 U.S.C. § 103(a) in view of Rothschild and further in view of Parvulescu and Xu.¹⁰³ The Applicant has grouped claim 35 by itself because claim 35 depends from claim 25 and includes an additional limitation of restoring medical data from a remote data store to a data source:

35. The method of claim 25, further comprising the step of restoring said medical data to said data source from said remote data store.

As described above, Xu is unavailable as a reference under 35 U.S.C. § 103(a). In addition, the Examiner recognized that “regarding[] claims 23 and 35-36 [sic]”¹⁰⁴,

¹⁰² MPEP § 2143.03 at 133 (citing *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988)).

¹⁰³ Final Office Action of Sept. 22, 2004 at 10. While the Applicant does not appeal the Examiner’s rejection of claims 25-29 and 31-34, the Applicant respectfully submits that claim 35, which depends from claim 25, would be allowable if rewritten in independent form including all of the limitations of claim 25

¹⁰⁴ The Examiner incorrectly inferred that pending claim 36 includes a limitation of restoring medical data from a remote data store to a data source. However, claim 36 includes a limitation of copying medical data from a remote data store to a second data source. Therefore, this Section

Rothschild does not explicitly teach the remote data store restores said medical data at said data source.”¹⁰⁵ As described above in part VI of the Argument section of this Brief, there is no disclosure in Rothschild discussing any act of restoring medical data from a remote location to a data source. Thus, Rothschild also does not suggest restoring medical data from a remote data store to a data source.

Finally, Parvulescu does not remedy the shortcomings of Rothschild. Parvulescu is devoid of any disclosure, description, teaching or suggestion of any type of data restoration to a data source, as described above in part VII of the Argument section of this Brief. Therefore, Parvulescu also does not teach or suggest a limitation of claim 35.

A combination of Rothschild and Parvulescu also fails to teach or suggest a remote data store restoring medical data to a data source. As neither reference teaches or suggests such data restoration, a combination of these references similarly cannot teach or suggest a remote data store restoring medical data to a data source.

None of the references cited by the Examiner and available as a reference in his rejection under 35 U.S.C. § 103(a) of claim 35 teach or suggest, alone or in combination, limitations of claim 35. Therefore, the Applicant respectfully submits that the rejection of claim 35 under 35 U.S.C. § 103(a) should not be allowed to stand.

of the Brief will only address claims 23 and 35 (the “restoring” claims). Part X of the Argument section of this Brief will address claim 36.

¹⁰⁵ Final Office Action of Sept. 22, 2004 at 10.

IX. Claims 15-18, 20, 24 And 54 Are Patentable Under 35 U.S.C. § 103(a) In View Of Rothschild And Further In View Of Parvulescu

The Examiner finally rejected pending claims 15-18, 20, 24 and 54 under 35 U.S.C. § 103(a) in view of Rothschild and further in view of Parvulescu.¹⁰⁶ For the sake of simplicity, the Applicant will only discuss the substantive merits of the patentability of independent claim 15, as claims 16-18, 20, 24 and 54 each depend from claim 15. Claim 15 recites (with emphasis added):

15. A system for remotely accessing a centralized data store, said system comprising:

a centralized remote data store storing medical data indexed according to data source, wherein said medical data comprises at least one of a medical image, a medical report, and a medical application, wherein said centralized remote data store comprises an application service provider;

a status monitor for controlling the transfer of said medical data from said centralized remote data store to a data source, wherein said status monitor monitors actions occurring at said data source and controls said centralized remote data store and said data source to **transfer said medical data from said centralized remote data store to said data source** based on a trigger, wherein said trigger is based on an action occurring at said data source; and

¹⁰⁶ Final Office Action of Sept. 22, 2004 at 5.

a data source receiving said medical data and storing said medical data.

Similar to the rejection of pending claim 8, described below, in his rejection of claim 15, the Examiner stated:

The central data management system (30) actively “push” the electronic record (5) and associated images (6) to the remote image viewing system (40) of the radiologists and referring doctors as soon as the images are available.¹⁰⁷

Once again, however, the excerpt of Rothschild cited by the Examiner (col. 22, lines 24-28) in support of his rejection merely describes a central data management system sending medical data to a remote viewing station, and not to a data source, as recited by claim 15. While Rothschild may disclose transferring medical data from a centralized data management system to a remote viewing system, Rothschild does not teach or suggest transferring medical data from the remote viewing system to a source of medical data.¹⁰⁸ Thus, Rothschild does not teach or suggest a remote data store that transfers medical data to a data source, as recited in pending claim 15.

Parvulescu does not remedy the shortcomings of Rothschild. Specifically, Parvulescu is devoid of any disclosure of transferring medical data to a data source from a centralized remote data store, as recited in pending claim 15.¹⁰⁹ Thus, Parvulescu also does not teach or suggest the same limitation of claim 15 as Rothschild.

¹⁰⁷ *Id.* at 6.

¹⁰⁸ See parts VI, VII and VIII of the Argument section of this Brief.

¹⁰⁹ See parts VII and VIII of the Argument section of this Brief.

Finally, a combination of Rothschild and Parvulescu also fails to teach or suggest a limitation of claim 15. As described above, neither Rothschild nor Parvulescu, taken alone or in combination, teach or suggest transferring medical data to a data source from a centralized remote data store, as recited in claim 15.

The Examiner provides no other support for his assertion that pending claim 15 is obvious in view of Rothschild and Parvulescu. Each of pending claims 16-18, 20, 24 and 54 depend from claim 15. Therefore, as Rothschild does not teach or suggest elements of pending claim 15, Applicant respectfully submits that the Examiner's rejection of claims 15-18, 20, 24 and 54 under 35 U.S.C. § 103(a) in view of Rothschild and Parvulescu should not be allowed to stand.

Moreover, pending claims 19 and 23 also depend from claim 15. The Applicant has grouped these pending claims separately from claims 15-18, 20, 24 and 54 because each of claims 19 and 23 includes additional patentable limitations, as described in more detail above in parts IV and VII of the Argument section of this Brief. However, if claim 15 is deemed patentable, then claims 19 and 23 must also be deemed patentable.

X. Claim 8 Is Patentable Under 35 U.S.C. § 103(a) In View Of Rothschild

The Examiner finally rejected pending claim 8 under 35 U.S.C. § 103(a) in view of Rothschild.¹¹⁰ The Applicant has grouped claim 8 by itself because claim 8 depends

¹¹⁰ Final Office Action of Sept. 22, 2004 at 2.

from claim 1 and includes an additional limitation directed towards medical data being transferred from a remote data store to a second data source (emphasis added):

8. The system of claim 1, further comprising a second data source for storing medical data, wherein **said remote data store transfers said medical data to said second data source.**

In his rejection, the Examiner stated:

[T]he central data management system (30) actively “push” the electronic record (5) and associated images (6) to the remote image viewing system (40) of the radiologists and referring doctors as soon as the images are available.¹¹¹

However, the excerpt of Rothschild cited by the Examiner (col. 22, lines 24-28) in support of his rejection merely describes a central data management system sending medical data to a remote viewing station. In other words, Rothschild does not teach sending or pushing medical data from a central data management system to a data source, but rather to a viewing station.

Rothschild repeatedly distinguishes a source of medical data from a remote viewing station. Specifically, the medical imaging system of Rothschild obtains or provides medical data, while a remote viewing station is used to view or experience the medical data obtained by the medical imaging system.

Rothschild repeatedly states that the medical imaging system is the component of the Rothschild invention that obtains or produces the medical data:

¹¹¹ *Id.* at 4.

The medical imaging system **produces** an electronic record in a computer-readable format and that comprises an electronic image associated with a region of a patient's body.¹¹²

The medical imaging system **produces** the electronic record that comprises an electronic image associated with a region of a patient's body in a computer-readable format.¹¹³

A patient study or exam is conducted at a medical imaging center using medical imaging system (10) to **obtain** a set of images associated with a targeted region of a patient's body. These images are provided by the medical imaging system in an electronic form as electronic images (6) that are part of an electronic record¹¹⁴

In short, the medical imaging system of Rothschild produces, obtains or otherwise creates medical data.

Rothschild also repeatedly states that the remote viewing systems are used by physicians, doctors, and radiologists to "experience," view, analyze or manipulate the medical images associated with the medical data:

The remote image viewing system (40) is how physicians and other users outside of the imaging center will **"experience" images** transported according to the invention, and thus the system (40) [m]ust be provided in a form that is well accepted by the medical community in particular. In a further aspect beneficial to healthcare providers, payers, and patient's alike, this viewer may be used, free of charge, **to view and analyze images** transported according to the invention¹¹⁵

In order to **display and manipulate the received images**, the invention in one aspect includes remote viewing system (40) that all radiologists and

¹¹² Rothschild at col. 8, lines 48-51 (emphasis added).

¹¹³ *Id.* at col. 12, lines 23-25 (emphasis added).

¹¹⁴ *Id.* at col. 18, lines 42-47 (emphasis added).

¹¹⁵ *Id.* at col. 24, lines 29-37 (emphasis added).

referring doctors must use in conjunction with the image delivery service of the invention.¹¹⁶

In short, the remote viewing system of Rothschild does not obtain or produce medical data, but is instead used to view or display medical data obtained or produced by the medical imaging system. While the second of the above quotations from Rothschild does state that the remote viewing system is used to “manipulate” received images, Rothschild limits such manipulation to adjusting the display characteristics of the images:

The remote image viewing system (40) preferably gives the physician the ability to change display formats, window and level the image (adjust the brightness and contrast), magnify the image, manipulate the grayscale, measure the anatomy and pathology, easily identify spatial locations, and to the extent there is direct-capture and lossless transmission make exact measurements and determine the location of abnormalities for surgical planning.¹¹⁷

This ability to manipulate the display of images at the remote viewing system is not the production or obtaining of medical data. The medical images have already been obtained or produced by the medical imaging system of Rothschild. The remote viewing system merely provides doctors with the ability to alter the display of the images to suit the doctors’ needs. In short, the remote viewing systems view medical data, but do not obtain or produce medical data.

Also, while Rothschild does disclose the remote viewing system communicating electronic records to the central data management system, this disclosure is limited to users of the remote viewing systems updating electronic records with new diagnostic

¹¹⁶ *Id.* at col. 24, lines 5-9.

¹¹⁷ *Id.* at col. 24, lines 15-23.

information and attaching reports to existing medical data that was obtained or produced by the medical imaging system:

FIG. 4 also shows electronic records (5) via flow arrows pointing in each of two opposite directions. This is intended to represent both forward and reverse flow of information related to the records (5), such as **returning updated versions of the records (5) with new diagnostic information** flowing from the remote image viewing system user according to various of the particular embodiments herein described and shown in the Figures. In particular, interpreting physicians, payers, and other parties outside of the medical imaging center and representing the remote image viewing systems of the invention will often **attach reports to the electronic record** for others to see, including the medical imaging center itself and other physicians. This is represented by the reverse flow of electronic record (5) as shown in FIG. 4, and the respective reports, etc., are shown schematically in FIG. 2 as new information (7') which is attached to the "header" or "data" section of electronic record (5) along side of the electronic image (6).¹¹⁸

By updating diagnostic information or attaching a report to an **existing** electronic medical record, the remote viewing systems of Rothschild do not perform the actions of a data source. The medical data has already been produced or obtained by the medical imaging systems of Rothschild—the remote viewing stations merely contribute to this data.

Rothschild is devoid of any additional disclosure, teaching or suggestion of producing or obtaining medical data at any location other than the medical imaging system. Therefore, the remote viewing systems of Rothschild are not sources of medical data.

¹¹⁸ *Id.* at col. 23, lines 1-18 (emphasis added).

While Rothschild may disclose transferring medical data from a centralized data management system to a remote viewing system, Rothschild does not teach or suggest transferring medical data from the remote viewing system to a source of medical data. Thus, Rothschild does not teach or suggest a remote data store that transfers medical data to a data source, as recited in pending claim 8.¹¹⁹

In conclusion, the Examiner's rejection of claim 8 under 35 U.S.C. § 103(a) in view of Rothschild should not be allowed to stand. Moreover, as claim 8 depends from claim 1, if claim 1 is deemed patentable, then claim 8 must also be deemed patentable.¹²⁰

XI. Claim 36 Is Patentable Under 35 U.S.C. § 103(a) In View Of Rothschild And Further In View Of Parvulescu And Further In View Of Xu

The Examiner finally rejected pending claim 36 under 35 U.S.C. § 103(a) in view of Rothschild and further in view of Parvulescu and further in view of Xu.¹²¹ Claim 36 recites (with emphasis added):

36. The method of claim 25, further comprising the step of copying said medical data from said remote data source to a second data source.

¹¹⁹ As described in more detail below, Parvulescu also fails to teach or suggest a remote data store that transfers medical data to a second data source, even though pending claim 8 was not rejected under 35 U.S.C. § 103(a) in view of Parvulescu. In addition, Xu is unavailable as a reference for a 35 U.S.C. § 103(a) rejection. Therefore, even though neither Parvulescu nor Xu were cited in the § 103(a) rejection of claim 8, neither Rothschild nor Parvulescu (the only two available references under § 103(a)), alone or in combination, teach or suggest limitations of claim 8.

¹²⁰ MPEP § 2143.03 at 133 (citing *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988)).

¹²¹ Final Office Action of Sept. 22, 2004 at 10.

In accordance with an embodiment of the present invention, medical data may be obtained by a first data source, archived at the remote data store, and then copied to a second data source.¹²² Such a copy or transfer of medical data may be used to copy or transfer medical data obtained by one data source to a new, upgraded, or replacement data source (the second data source), for example.¹²³

As described above in part X of the Argument section of this Brief, neither Rothschild nor Parvulescu, taken alone or in combination, teach or suggest transferring medical data from a remote data store to a data source. If neither Rothschild nor Parvulescu teach or suggest transferring medical data from a remote data store to a data source, then neither Rothschild nor Parvulescu can teach or suggest transferring medical data from a remote data store to a **second** data source, as recited in claim 36.

Also as described above in part VI of the Argument section of this Brief, Xu is unavailable as a reference under a 35 U.S.C. § 103(a) rejection. Therefore, none of the available references cited by the Examiner teach or suggest, alone or in combination, limitations of claim 36. Thus, the Applicant respectfully submits that the Examiner's § 103(a) rejection of claim 36 should not be allowed to stand.

¹²² See, e.g., Pending Application Serial No. 09/681,471 at ¶ 44.

¹²³ *Id.* at ¶¶ 43-45.

XII. Claim 53 Is Patentable Under 35 U.S.C. § 103(a) In View Of Rothschild And Further In View Of Parvulescu

In the Final Office Action of September 22, 2004, the Examiner finally rejected claim 53 under 35 U.S.C. § 103(a) in view of Rothschild and further in view of Parvulescu.¹²⁴ Claim 53 is directed towards a dedicated network connection for transferring medical data between a data source and a remote data store:

53. The system of claim 1, further comprising a dedicated network connection for transferring said medical data between said medical data source and said centralized remote medical data store.

In rejecting claim 53, the Examiner stated:

Regarding on claim 53, Rothschild teaches a dedicated network connection for transferring said medical data between said medical data source and said centralized remote medical data store (col. 19, lines 36-39).¹²⁵

However, the excerpt from Rothschild cited by the Examiner does not teach or suggest a dedicated network connection for transferring medical data between a data source and a remote data store. When read in the context of the preceding and following text of Rothschild, the excerpt reads:

Local image workstation (20) is located at the medical imaging center and communicates with a medical imaging system (10) generally onsite at the center's location via a local interface (15). The terms "local interface" are herein intended to mean interfaces that use locally managed and generally non-publicly accessed and used networks and routers. For the purpose of further illustration, local interfaces according to the intended meaning include without limitation hard-wired direct interfaces,

¹²⁴ Final Office Action of Sept. 22, 2004 at 5.

¹²⁵ *Id.* at 10.

extensions of data paths, and locally routed and/or managed LANs or telecommunication interfaces such as telephone lines that when used according to the invention do not extend beyond a locally and generally privately managed and used router and therefore generally do not use publicly accessed and used telecommunications networks, nodes, or routers.¹²⁶

In other words, Rothschild describes a connection between a local image workstation and a medical imaging system that is “locally managed and generally non-publicly accessed and used”¹²⁷ As described above, Rothschild’s medical imaging system is a source of medical data, as the medical imaging system is the system “that provides images in electronic form for electronic delivery.”¹²⁸ The local image workstation of Rothschild “acquire[s] the electronic image data from the imaging system.”¹²⁹ The excerpt cited by the Examiner in rejecting claim 53 therefore relates to the connection between a data source that provides electronic images (local imaging system) and an image acquisition device (local image workstation). The excerpt does not describe any type of connection between a data source and a remote data store, as recited in claim 53.

In contrast, in describing connections between a data source and a central data management system and connections between the central data management system and a remote viewing system, Rothschild explicitly teaches away from using dedicated network connections for transferring medical data by only describing connections over publicly accessible networks. Specifically, Rothschild describes the communication of medical

¹²⁶ Rothschild at col. 19, lines 33-47.

¹²⁷ *Id.* at col. 19, lines 37-38.

¹²⁸ *Id.* at col. 19, lines 21-22.

¹²⁹ *Id.* at col. 19, line 50.

data between the medical imaging system and the central data management system as occurring over non-dedicated, publicly accessible networks:

Central data management system (30) is generally located remotely from the medical imaging center, and communicates with local image workstation (20) via a remote interface (25). . . .

The terms "remote interface" are herein intended to mean interfaces that use wide area networks (WANs) or other publicly accessed and centrally managed networks or routers such as for example cable networks and publicly accessed telecommunications networks, nodes, and routers. Therefore, in another sense remote interfaces are communication interfaces that reach beyond local interfaces as described herein. In one highly beneficial mode, the remote interfacing with the central data management system (30) for the push transfer of images to and from that central image management system will employ fast digital lines and flow over the Internet.¹³⁰

Therefore, at each of the locations where the images would be needed, the remote image viewing station (40) would be running and available at all times on the Internet in order to achieve immediate "push" delivery of the images as soon as they become available.¹³¹

In fact, Rothschild repeatedly touts using the Internet for the connection between the various components of his invention:

The systems and methods of the invention for managing medical images electronically over remote interfaces such as via the internet also allow for a highly economical method for providing a medical image management ASP in a manner that expands the bottom line for medical imaging centers in particular.¹³²

With the recent advent of broadband Internet connections, which by the end of 2001 will be available to the majority of the population in the form of Digital Subscriber Lines (DSL), continued adoption of this communication mode by the healthcare community will expand the

¹³⁰ *Id.* at col. 20, line 49 through col. 21, line 6 (emphasis added).

¹³¹ *Id.* at col. 22, lines 33-38.

¹³² *Id.* at col. 14, lines 36-41.

significant transition in the way images are managed between remote locations according to the management system and method of the invention.¹³³

The referring physicians and other users of the invention will be strongly encouraged to use DSL for interfacing the remote image viewing system (40) with the central data management system (30) of the invention since this provides for fastest and economical Internet access. Moreover, it is preferred that the Internet connection between the central data management system (30) and the remote viewing system be continuously online in order to best facilitate the “push” delivery aspect of the invention.¹³⁴

Therefore, Rothschild describes non-dedicated and publicly available connections between the imaging system and the central data management system, and between the central data management system and the remote viewing system. Rothschild does not teach or suggest the use of any dedicated connection between any of these components of the Rothschild invention for communicating medical data. As a non-dedicated, publicly available network connection differs substantially from a dedicated connection, Rothschild teaches away from using a dedicated network connection for transferring medical data. Thus, Rothschild does not teach or suggest limitations of claim 53.

In addition, Parvulescu does not remedy the shortcomings of Rothschild. Parvulescu does disclose the use of various networks for transferring medical images from a medical imaging device to a medical image archiving device. Specifically,

¹³³ *Id.* at col. 18, lines 21-27.

¹³⁴ *Id.* at col. 25, lines 11-17.

Parvulescu discloses the use of a Wide Area Network (“WAN”), a Local Area Network (“LAN”), or the Internet as the network connections for transferring medical data.¹³⁵

However, while Parvulescu may disclose the use of various networks for transferring medical images from a medical imaging device to a medical image archiving device, none of the disclosed networks include a dedicated network connection. That is, Parvulescu is devoid of any disclosure of a connection between an imaging device and an archiving device, where the connection is dedicated to the communication of medical images between the two devices. Therefore, Parvulescu does not teach or suggest a dedicated network connection for transferring medical data between a data source and a remote data store, as recited in claim 53.

Moreover, a combination of Rothschild and Parvulescu similarly fails to teach or suggest elements of claim 53. As described above, neither Rothschild nor Parvulescu teach or suggest the use of a dedicated network connection for transferring medical data between a data source and a remote data store. Therefore, a combination of Rothschild and Parvulescu similarly fails to teach or suggest such a dedicated connection. Thus, a combination of Rothschild and Parvulescu does not teach or suggest limitations of claim 53.

The Applicant respectfully submits that the Examiner’s § 103(a) rejection of claim 53 should not be allowed to stand. Moreover, as claim 53 depends from claim 1, if claim 1 is deemed patentable, then claim 53 must also be deemed patentable.

¹³⁵ Parvulescu at col. 1, lines 61-64 and col. 3, lines 19-26.

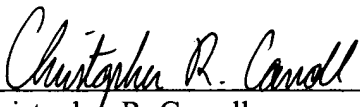
CONCLUSION

For the foregoing reasons, claims 1-8, 11-20, 23-24, 30, 35-36 and 53-54 are distinguishable over the prior art. The Applicant has worked with the Examiner through requests for continued examination, telephonic interviews, and amendments to claims to reach agreement with the Examiner despite a lack of relevant prior art. The Examiner has been afforded the opportunity through multiple RCEs to search the prior art and find references which anticipate or render obvious the pending claims. Thus, the Applicant respectfully requests a reversal of the Examiner's rejection and issuance of a patent on the present application.

The Commissioner is authorized to charge any necessary fees or credit any overpayment to the Deposit Account of GEMS-IT, Account No. 50-2401.

Respectfully submitted,

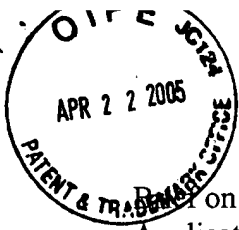
Date: April 22, 2005



Christopher R. Carroll
Registration No. 52,700

MCANDREWS, HELD & MALLOY, LTD.
500 West Madison Street, 34th Floor
Chicago, IL 60661

Telephone: (312) 775-8000
Facsimile: (312) 775-8100



Request on Appeal
Application No. 09/681,471

APPENDIX

1. A central medical data archiving system, said system comprising:
 - a medical data source providing medical data, wherein said medical data comprises at least one of a medical image, a medical patient report, and a medical application;
 - a status monitor for controlling the transfer of said medical data from said data source to a centralized remote data store, wherein said status monitor monitors operations occurring at at least one of said data source and centralized remote data store and triggers transfer of said medical data to said centralized remote data store based on said operations; and
 - a centralized remote medical data store receiving said medical data and storing said medical data, wherein said centralized remote medical data store comprises an application service provider.
2. The system of claim 1, wherein said status monitor verifies said transfer of said medical data from said data source to said remote data store.
3. The system of claim 1, further comprising an access authenticator for authenticating access to said remote data store by said data source.
4. The system of claim 3, wherein said access authenticator authenticates access to said data source.

5. The system of claim 1, wherein said data source further stores medical data.

6. The system of claim 5, wherein said remote data store further restores said medical data to said data source.

7. The system of claim 1, wherein said remote data store stores a copy of said medical data.

8. The system of claim 1, further comprising a second data source for storing medical data, wherein said remote data store transfers said medical data to said second data source.

9-10. (Canceled)

11. The system of claim 1, wherein said status monitor controls the transfer of data from said data source to said remote data store at a definable interval.

12. The system of claim 11, wherein said definable interval comprises a timed interval.

13. The system of claim 11, wherein said definable interval comprises an event-based interval.

14. The system of claim 11, wherein said definable interval comprises a manual interval.

15. A system for remotely accessing a centralized data store, said system comprising:

a centralized remote data store storing medical data indexed according to data source, wherein said medical data comprises at least one of a medical image, a medical report, and a medical application, wherein said centralized remote data store comprises an application service provider;

a status monitor for controlling the transfer of said medical data from said centralized remote data store to a data source, wherein said status monitor monitors actions occurring at said data source and controls said centralized remote data store and said data source to transfer said medical data from said centralized remote data store to said data source based on a trigger, wherein said trigger is based on an action occurring at said data source; and

a data source receiving said medical data and storing said medical data.

16. The system of claim 15, further comprising a second data source storing medical data.

17. The system of claim 16, wherein said status monitor controls the transfer of said copy of said medical data between said remote data store and said second data source.

18. The system of claim 16, wherein said status monitor verifies the transfer of said copy of said medical data between said remote data store and said second data source.

19. The system of claim 15, further comprising an access authenticator for authenticating access to said remote data store.

20. The system of claim 15, wherein said status monitor verifies said transfer of said medical data between said data source and said remote data store.

21-22. (Canceled)

23. The system of claim 15, wherein said remote data store restores said medical data at said data source.

24. The system of claim 15, wherein said remote data store comprises at least one directory corresponding to said data source.

25. A method for remotely archiving medical data, said method comprising:
detecting an operation involving medical data executed at a medical data source;
transferring said medical data from said medical data source to a centralized remote data store based on a trigger, wherein said trigger is produced based on said operation executed at said data source, wherein said medical data comprises at least one of a medical image, a medical report, and a medical application;
storing said medical data at said centralized remote data store; and
indexing said medical data according to said data source.

26. The method of claim 25, further comprising the step of obtaining said medical data.

27. The method of claim 25, further comprising the step of storing said medical data at said data source.

28. The method of claim 25, wherein said storing step further comprises storing said medical data at said remote data store in a directory corresponding to said data source.

29. The method of claim 25, wherein said transferring step further comprises verifying said transfer of medical data from said remote data store to said data source.

30. The method of claim 25, further comprising the step of authenticating access to said remote data store.

31. The method of claim 25, wherein said transferring step occurs after a definable interval.

32. The method of claim 31, wherein said definable interval comprises a timed interval.

33. The method of claim 31, wherein said definable interval comprises an event-based interval.

34. The method of claim 31, wherein said definable interval comprises a manual interval.

35. The method of claim 25, further comprising the step of restoring said medical data to said data source from said remote data store.

36. The method of claim 25, further comprising the step of copying said medical data from said remote data source to a second data source.

53. The system of claim 1, further comprising a dedicated network connection for transferring said medical data between said medical data source and said centralized remote medical data store.

54. The system of claim 15, further comprising a private network connection for transferring said medical data between said data source and said centralized remote data store.